

## REMARKS

**Claims 1, 3-6, 10-19, and 28-44** remain pending in the present application. Applicant amends independent Claims 1, 28, and 36 to clarify claimed subject matter and/or correct informalities. The original specification and drawings support these claim amendments at least at pages 2, 28, in Figures 1, and 2. Therefore, these revisions introduce no new matter.

**Claims 1, 3-6, 10-19, and 28-44** are for consideration upon entry of the present Amendment. Applicant requests favorable consideration of this response and allowance of the subject application based on the following remarks.

### *Previous Claims Rejections Under 35 USC §103*

Applicant appreciates Examiner's withdrawal of the 35 USC §103 rejections of the previous Office Action and withdrawal of the finality of the final office action.

### *Claim Rejections 35 U.S.C. §101*

**Claims 1, 3-6, 10-19, and 28-44** stand rejected under 35 U.S.C. §101 because the claimed invention is directed to non-statutory subject matter. More specifically, claims 1, 28, and 36, merely cite descriptive material, mere arrangements or compilations of facts or data, or computer program per se, and are not statutory, wherein the claim fails to produce any tangible concrete result.

Without conceding the propriety of the stated rejections, and only to advance the prosecution of this application, Applicant amends **independent Claim 1**, to clarify further

features of the subject matter. **Claim 1** recites a method of using a tuning set of information to jointly optimize the performance and size of a language model, comprising:

providing a textual corpus comprising subsets wherein each subset comprises a plurality of items;

creating a Dynamic Order Markov Model data structure by assigning each item of the plurality of items to a node in the data structure, wherein the nodes are logically coupled to denote dependencies of the items, and calculating a frequency of occurrence for each item of the plurality of items;

segmenting at least a subset of a received textual corpus into segments by clustering every N-items of the received corpus into a training unit, wherein resultant training units are separated by gaps, and wherein N is an empirically derived value based, at least in part, on the size of the received corpus;

creating the tuning set from application-specific information;

(a) training a seed model via the tuning set;

(b) calculating a similarity within a sequence of the training units on either side of each of the gaps;

(c) selecting segment boundaries that maximize intra-segment similarity and inter-segment disparity;

(d) calculating a perplexity value for each segment based on a comparison with the seed model;

(e) selecting some of the segments based on their respective perplexity values to augment the tuning set;

iteratively refining the tuning set and the seed model by repeating steps (a) through (e) with respect to a threshold;

refining the language model based on the seed model;

generating the language model that is representative of the textual corpus for use by a host of applications; and

providing recognition of the textual corpus based on the language model.

As shown, amended Claim 1 recites a practical and useful purpose, such as “generating the language model representative that is representative of the textual corpus for use by a host of applications; and providing recognition of the textual corpus based on the language model”. Therefore, this claim has statutory subject matter.

**Independent Claims 28 and 36** are directed to a modeling agent and a method, and each is allowable for reasons similar to those discussed above with respect to Claim 1.

**Dependent Claims 3-6, 10-19, 29-36, and 37-44** depend directly or indirectly from one of independent Claims 1, 28, and 36 respectively, and thus are depending from statutory subject matter base claims. These claims comply with 35 U.S.C. §101 and as a result, the rejections are now moot. Consequently, Applicant respectfully requests that the §101 rejections be withdrawn.

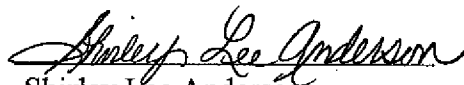
**Conclusion**

**Claims 1, 3-6, 10-19, and 28-44** are in condition for allowance. Applicant respectfully requests reconsideration and prompt issuance of the present application. If any issues remain that preclude issuance of the application, the Examiner is urged to contact the undersigned attorney before issuing a subsequent Action.

Respectfully Submitted,

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